

OIP E-JC:56
NOV 03 2003
PATENT & TRADEMARK OFFICE

Magnetic Bias Pinning Layer For GMR
Sensor of a Magnetic Head for a Hard Disk
Drive
S/N: 10/631,340
Atty. Docket #HSJ9-2003-0107US1

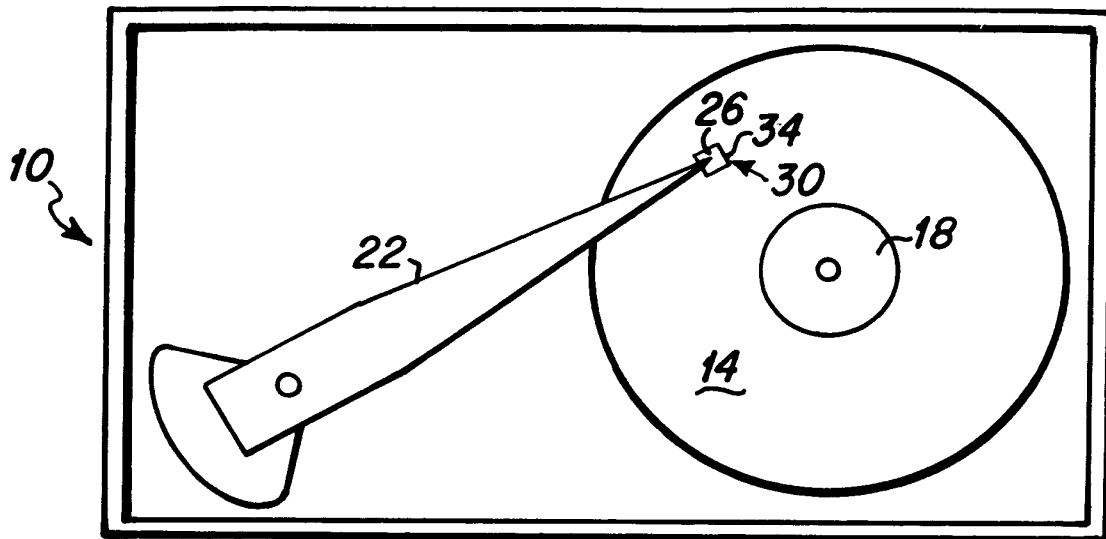


Fig.1

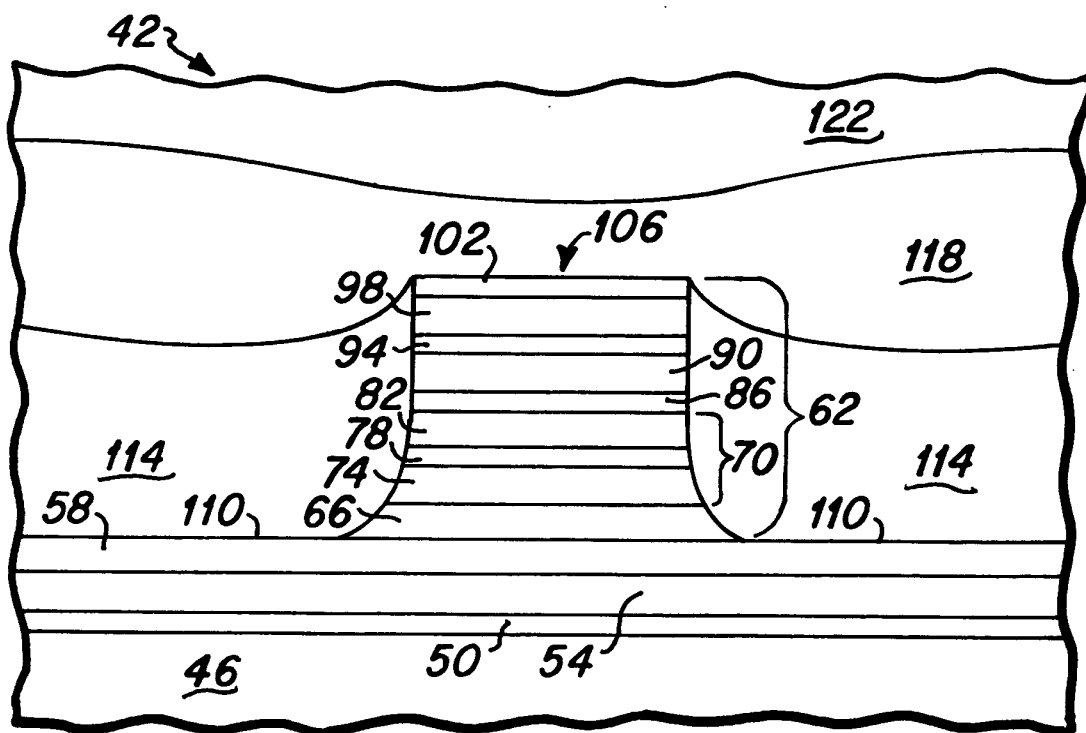


Fig.2 (PRIOR ART)

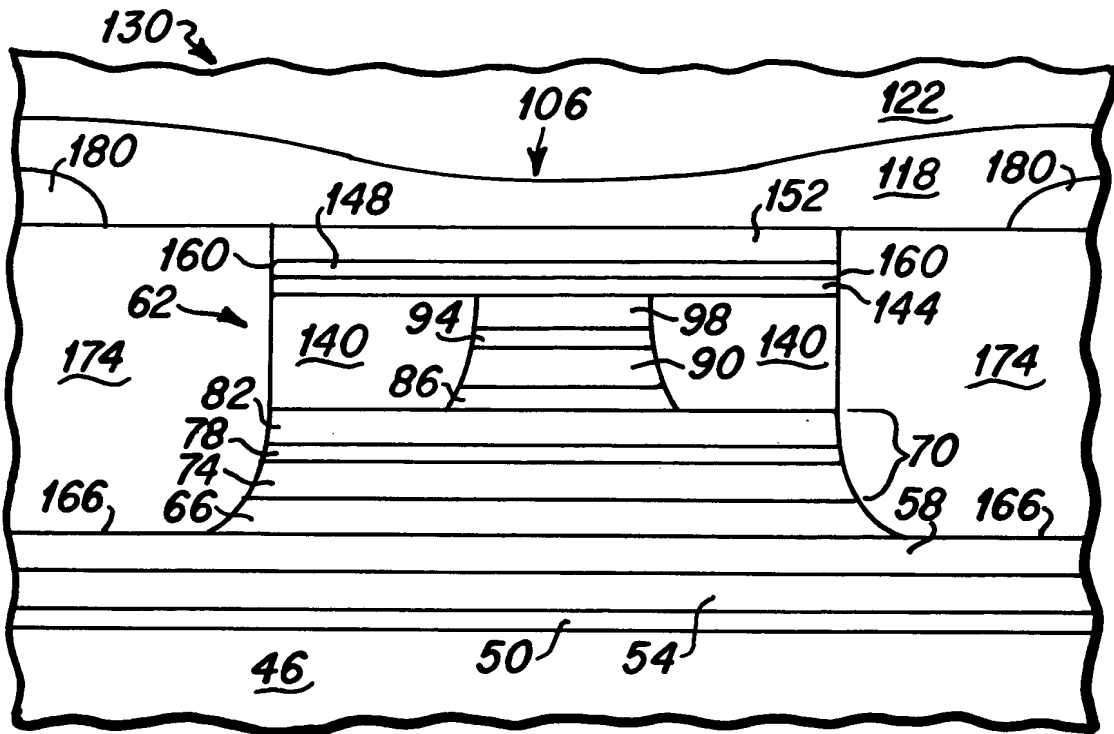


Fig.3

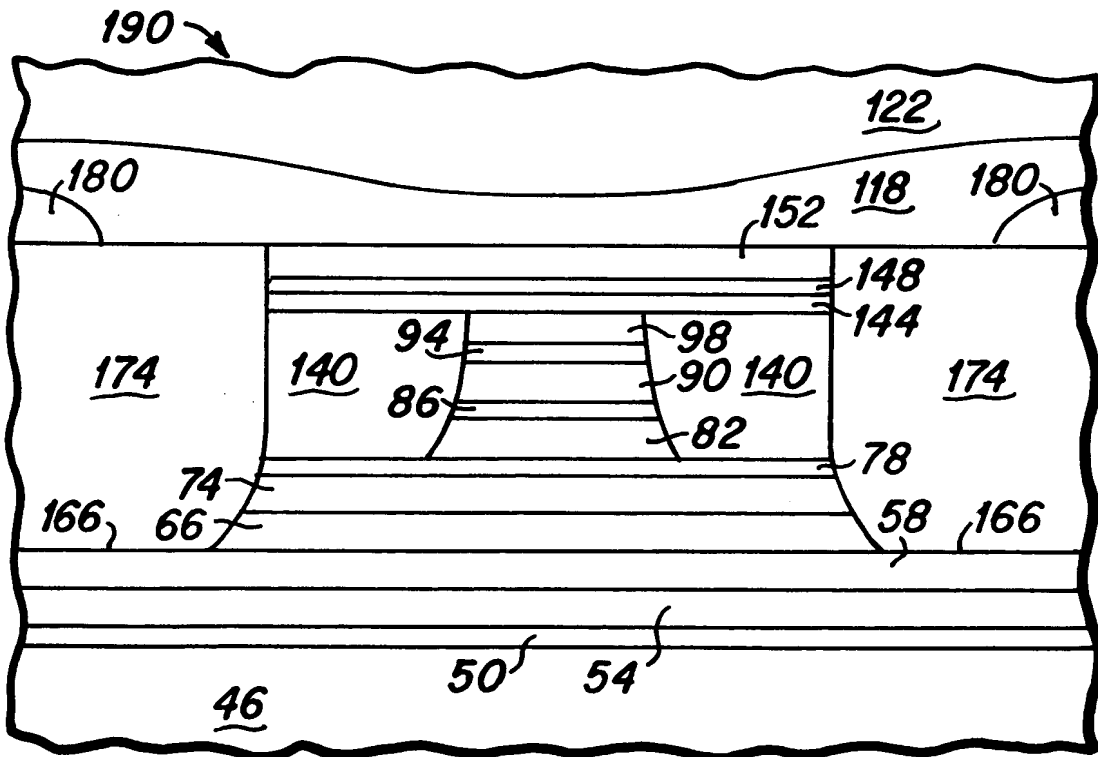


Fig.4